

temporary valve being operative to effect greater antegrade flow than retrograde flow through said vessel; and

b) placing at least one temporary filter in said flowpath downstream from said cardiac valve, said filter being operative to restrict the passage of emboli while allowing blood to flow through said vessel.

40. A method for performing an operation on a cardiac valve of a heart while the heart is beating, comprising the steps of:

a) positioning at least one temporary valve in a flow path of a blood vessel downstream from said cardiac valve, said temporary valve being operative to effect greater antegrade flow than retrograde flow through said vessel;

b) resecting or disrupting at least a portion of the cardiac valve; and

c) affixing at least one prosthetic valve at, upstream or downstream from said resected cardiac valve.

of the circles formed by at least two circumferences of said cylindrical shape along the distance between said apex and said base, said fixation device comprising:

a) at least two expandable mounting rings, said rings being expandable from a first compressed state having a relatively small maximum transverse dimension to a second expanded state having a relatively large maximum transverse dimension, said rings expandable in a direction perpendicular to the long axis of said prosthetic valve, each of said rings being affixed to said prosthetic valve near a respective end thereof.

44. A valve fixation device for affixing a non-flexible prosthetic valve to the interior wall of a vessel, said prosthetic valve having a generally cylindrical shape with a base, an apex, an interior surface and an exterior surface, said prosthetic valve further having a long axis passing through the centers of the circles formed by at least two circumferences of said cylindrical shape along the distance between said apex and said base, said fixation device comprising:

a) at least one expandable mounting ring, said ring being expandable from a first compressed state

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having a relatively small maximum transverse dimension to a second expanded state having a relatively large maximum transverse dimension, said ring expandable in a direction perpendicular to the long axis of said prosthetic valve, each of said ring being affixed to said prosthetic valve near a respective end thereof.

45. A valve fixation device for affixing a flexible prosthetic valve to the interior wall of a vessel, said prosthetic valve having a generally cylindrical shape with a base, an apex, an interior surface and an exterior surface, said prosthetic valve further having a long axis passing through the centers of the circles formed by at least two circumferences of said cylindrical shape along the distance between said apex and said base, said fixation device comprising:

a) at least one expandable mounting ring, said ring being expandable from a first compressed state having a relatively small maximum transverse dimension to a second expanded state having a relatively large maximum transverse dimension, said ring expandable in a direction perpendicular to the long axis of said

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b) implanting a prosthetic valve downstream, upstream or at said cardiac valve.



b) implanting a prosthetic valve downstream, upstream or at said cardiac valve.

48. A method for enabling performance of an operation on a cardiac valve of a heart while the heart is beating, comprising the steps of:

a) placing at least one temporary valve in a flow path of blood vessel, said temporary valve being operative to effect greater antegrade flow than retrograde flow through said vessel; and

b) placing at least one temporary filter in said flowpath downstream from said cardiac valve, said filter being operative to restrict the passage of emboli while allowing blood to flow through said vessel.

49. A method for performing an operation on a cardiac valve of a heart while the heart is beating, comprising the steps of:

a) positioning at least one temporary valve in a flow path of blood, said temporary valve being operative to effect greater antegrade flow than retrograde flow;

b) resecting or disrupting at least a portion of the cardiac valve; and

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